

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No. : 09/446,550
Inventor(s) : Olaf Isele, et al.
Filed : December 22, 1999
Art Unit : 3761
Examiner : Catharine L. Anderson
Docket No. : CM1519Q
Confirmation No. : 2485
Customer No. : 27752
Title : Disposable Absorbent Articles With Clothlike Feel
Backsheet Having Zoned Breathability And Process For
Making Such Backsheets

APPEAL BRIEF

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

This Brief is filed pursuant to the appeal from the decision communicated in the Office Action mailed on May 1, 2007 (hereinafter the "last Office Action"). A timely Notice of Appeal was filed on October 1, 2007. This Brief is filed pursuant to that Notice, with a three-month extension per the attached petition and required fee.

REAL PARTY IN INTEREST

The real party in interest is The Procter & Gamble Company of Cincinnati, Ohio.

RELATED APPEALS AND INTERFERENCES

There are no known related appeals, interferences, or judicial proceedings.

STATUS OF CLAIMS

Claims 1-15 and 21-25 are rejected. Claims 1-15 and 21-25 are appealed. A complete copy of the appealed claims is set forth in the Claims Appendix attached herewith.

STATUS OF AMENDMENTS

No amendment has been filed subsequent to the last Office Action.

SUMMARY OF CLAIMED SUBJECT MATTER

Independent claim 1 claims an absorbent article (#20 in Fig. 1, page 4, line 32) comprising an absorbent core (#28 in Fig. 1, page 5, lines 2-3) defining a core region (page 16, lines 14-31, page 17, lines 13-15, 22-34) comprising a core backsheet material; a chassis region (page 17, lines 1-20) surrounding said core region comprising a chassis backsheet material; whereby at least the core backsheet material comprises a laminate (page 10, lines 19-27, page 10, line 33-page 11, line 2); said laminate comprising at least one polymeric layer comprising a vapour or gas permeable film material (page 2, line 35-page 3, line 2), and further comprising a fibrous layer (page 2, line 35-page 3, line 2) positioned towards the outer side of the article during its intended use, wherein the core backsheet material and the chassis backsheet material are each breathable and exhibit different degrees of breathability such that MVTR value of the core backsheet material is lower than that of the chassis backsheet material (page 17, lines 13-24), as measured by calcium-chloride absorbing moisture through each of said materials under an outside relative humidity of about 75 % at a temperature of about 40 °C (pages 18-19), wherein said polymeric layer comprises a polymeric matrix and particulate filler material embedded in said polymeric matrix (page 9, lines 18-22) and wherein said breathability of said core backsheet material is provided by cracks formed around said particulate filler material (page 9, lines 22-27), wherein at least a portion of said cracks is formed by passing said laminate through (page 11, lines 4-16) at least one roll pair (#220, #221, #225, Figs. 2 and 3), said roll pair comprising engaging ridges (#235 in Figs. 2 and 3) and grooves (#231, in Figs. 2 and 3) which apply a multiplicity of corrugations to at least a portion of said laminate.

The Applicant argues claims 1-15 and 21-25 all together.

GROUND OF REJECTION TO BE REVIEWED ON APPEAL

Whether claims 1-15 and 21-25 are unpatentable under 35 USC § 103(a) over Dobrin, et al. (US 5,628,737) in view of Wu, et al. (US 5,865,926).

ARGUMENTS

The Applicant's independent claim 1 recites in part an "Absorbent article comprising: an absorbent core defining a core region comprising a core backsheet material; [and] a chassis region surrounding said core region comprising a chassis backsheet material; wherein the core backsheet material and the chassis backsheet material are each breathable and exhibit different degrees of breathability such that [the] MVTR value of the core backsheet material is lower than that of the chassis backsheet material." The Applicant's independent claim 1 also recites that the "breathability of said core backsheet material is provided by cracks formed around...particulate filler material."

The Applicant notes that MVTR is an acronym for Moisture Vapor Transmission Rate, which is a measure of a material's breathability. A lower MVTR value indicates less breathability. (For a brief description of MVTR breathability, see the Applicant's specification, pages 9-10.) So, in the absorbent article of the Applicant's independent claim 1, the core backsheet material is less breathable than the chassis backsheet material.

The Applicant's specification describes the core region and the chassis region as follows:

For the scope of the following description, the article is being considered to consist essentially of two regions, namely one part of the article comprising the absorbent core (generally in the central region of the article), the other part complimenting the rest of the article.

Thus, the "core region" covers the regions which will in use cover the body opening from which the exudates are discharged, and will further extend up to into the waist region, or regions.

....

The "chassis region" comprises the design elements of the article to hold the article on the wearer (i.e. fixation means), the elements to prevent the exudates from leaking out of the article (e.g. the leg closure elastics means, or the waist features), and means to connect the various elements.

(Specification, page 16, lines 14-23, page 17, lines 1-4.)

The Applicant's application illustrates an embodiment of an absorbent article in Figure 1, shown below.

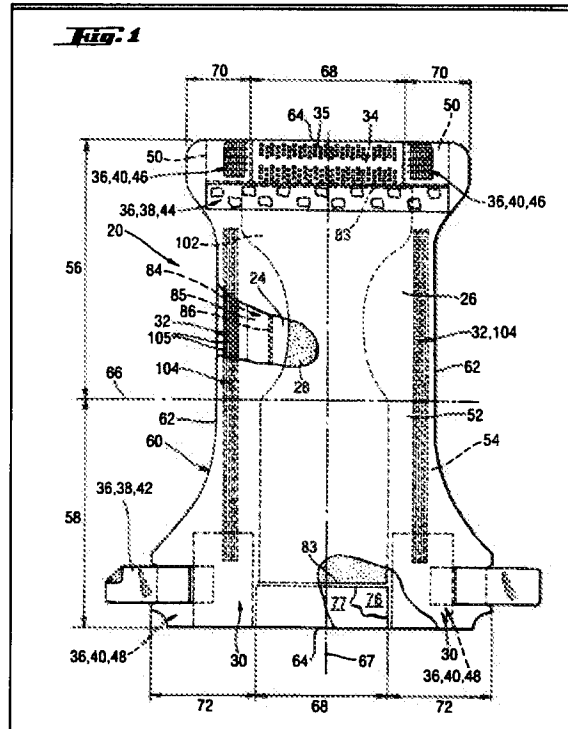


Figure 1 of the Applicant's application illustrates an absorbent article, which is a diaper 20 with an absorbent core 28, a central region 68, and side panels 70, 72. (Page 5, lines 2, and 28-32.)

The last Office Action cited the Dobrin reference and the Wu reference against the Applicant's independent claim 1. The last Office Action stated that:

Dobrin discloses an absorbent article 20, as shown in Figure 2, comprising a core region 74, and a chassis region 76 surrounding the core region 74....The laminate 95 comprises apertures 84 in the chassis region 76, giving the chassis region 76 a higher degree of breathability than the core region 74.

Wu discloses a breathable laminate for use in an absorbent article...comprising a polymeric film layer and a fibrous layer....The polymeric film comprises a polymeric matrix and a particulate filler material....The breathability of the laminate is enhanced by the formation of cracks around the particulate filler material....

It would therefore be obvious to one of ordinary skill in the art at the time of invention to construct the laminate of Dobrin using the polymeric film layer of Wu to increase the breathability of the laminate.

...Wu teaches an improvement to a film that is both breathable and impervious. That Dobrin does not provide a motivation to modify the backsheet is irrelevant, since Wu provides such a motivation.

(Page 4, paragraphs 1-2, page 5, paragraph 1, page 2, paragraph 3.) From the Applicant's review, it appears that the last Office Action takes the position that it would have been obvious to create a backsheet with overall breathability (described in the Wu reference) and with regions of apertures (described in the Dobrin reference), resulting in a backsheet that is more breathable in the regions with apertures and less breathable in the region without apertures.

The Dobrin reference illustrates an embodiment of an absorbent article in Figure 2, shown below.

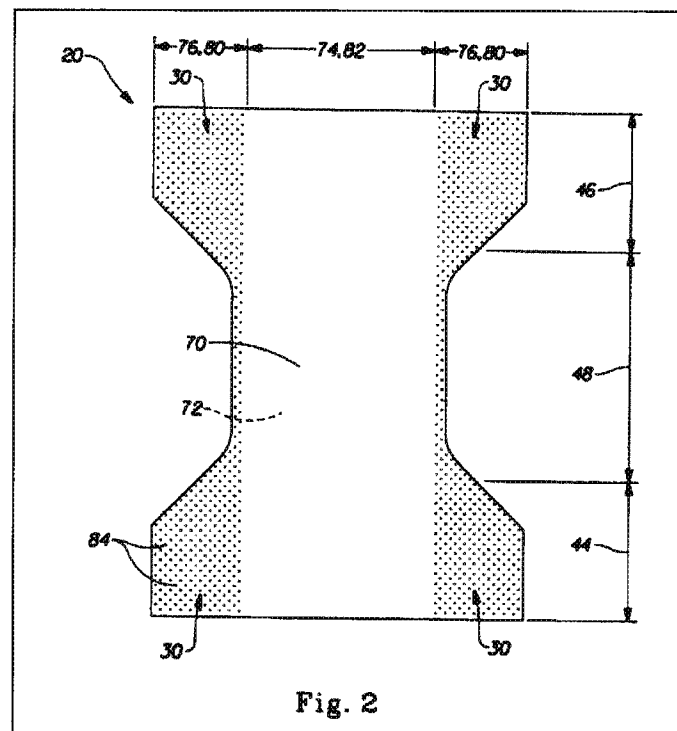


Figure 2 of the Dobrin reference illustrates a diaper 20, wherein "the backsheet 26 comprises a central region 76 comprising a liquid impervious, non-apertured film and two opposing outer regions 76 comprising an air pervious, apertured film. (Col. 6, lines 30-31, 53-56.)

The rejections of claims 1-15 and 21-25 under 35 USC § 103(a) over the Dobrin and Wu references are improper, because the Final Office Action failed to establish a *prima facie* case of obviousness, since the teachings of the cited references conflict with each other.

“The test for obviousness is what the combined teachings of the references would have suggested to one of ordinary skill in the art, and all teachings in the prior art must be considered to the extent that they are in analogous arts. Where the teachings of two or more prior art references conflict, the examiner must weigh the power of each reference to suggest solutions to one of ordinary skill in the art, considering the degree to which one reference might accurately discredit another. *In re Young*, 927 F.2d 588, 18 USPQ2d 1089 (Fed. Cir. 1991).” MPEP § 2143.01 (II).

The Dobrin reference reviews prior art backsheets. First, the Dobrin reference discusses prior art backsheets that are both liquid impervious and vapor impermeable. The Dobrin reference states:

Infants and other incontinent individuals wear disposable absorbent articles such as diapers to receive and contain urine and other body exudates. Absorbent articles function both to contain the discharged materials and to isolate these materials from the body of the wearer and from the wearer's garments and bed clothing. Disposable absorbent articles having many different basic designs are known to the art. It is also known that the exterior of disposable diapers can be covered with a flexible, liquid and vapor impervious sheet to prevent any absorbed liquid from passing through the diaper and soiling adjacent articles such as clothing, bedding and the like. These outer covers, generally referred to as backsheets, are often constructed from fluid impervious films such as polyethylene. Although such backsheets do prevent liquid from passing through the diaper, they also can make the diaper feel hot and uncomfortable to wear because of their impermeability to air and/or moisture.

(Col. 1, lines 14-30.) Second, the Dobrin reference discusses prior art backsheets that are liquid impervious but vapor permeable, and provides two examples. The Dobrin reference states:

Backsheets which are pervious to vapor are generally known as breathable backsheets and have been described in the art. In general, these backsheets are intended to allow the passage of vapor through them while retarding

the passage of liquid. For example, U.S. Pat. No. 3,156,242 issued to Crowe, Jr. on Nov. 10, 1964 teaches the use of a microporous film as a breathable backsheet. U.S. Pat. No. 3,881,489, issued to Hartwell on May 6, 1975, teaches a breathable backsheet comprising in combination two layers, the first of which is a low void volume perforated thermoplastic film and the second of which is a porous high void volume hydrophobic tissue. U.S. Pat. No. 3,989,867 issued to Sisson on Nov. 2, 1976 teaches a breathable backsheet provided with tapered hollowed bosses which prevent the passage of liquids while allowing vapors to pass readily therethrough.

(Col. 1, lines 31-46.) Third, the Dobrin reference appears to discredit prior art backsheets that are liquid impervious but vapor permeable. The Dobrin reference states:

While these backsheets do provide improvements over the impermeable backsheets of the prior art, they can be relatively expensive and/or difficult to manufacture, especially at high speeds. Often, numerous layers of materials or coatings are needed to provide breathable backsheets capable of containing liquids that may be absorbed by the diaper. Further, in some cases, the breathable backsheets may not effectively contain liquid, especially when the diaper is subjected to the normal forces created by the movements of the wearer.

(Col. 1, lines 46-55.) Thus, the Dobrin reference also appears to discredit prior art backsheets that are liquid impervious but vapor permeable, by teaching some of their disadvantages.

The Wu reference was filed on February 16, 1996. The Dobrin reference was filed on July 30, 1996. Therefore, the Wu reference appears to be prior art to the Dobrin reference. The title of the Wu reference is "Method of Making a Cloth-Like Microporous Laminate of a Nonwoven Fibrous Web and Thermoplastic Film having Air and Moisture Vapor Permeabilities with Liquid-Barrier Properties." Therefore, the embodiments of the Wu reference appears to relate to backsheets that are vapor permeable and liquid impermeable. These backsheet embodiments appear to be prior art to the Dobrin reference – the same prior art backsheets discredited by the Dobrin reference.

The last Office Action attempted to distinguish the prior art backsheets discredited in Dobrin, with the following arguments:

In response to the applicant's arguments that Dobrin teaches away from a microporous film, it is noted that the microporous films discussed by

Dobrin in column 1, lines 31-46, are not the same type of microporous film taught by Wu. The microporous films discussed by Dobrin, such as that disclosed by Crowe, Jr., are not films comprising a filler material such as those taught by Wu. Wu discloses a film that overcomes the disadvantages of the microporous films discussed by Dobrin, and therefore it would have been obvious to modify Dobrin based on the teachings of Wu.

(Page 3, paragraph 1.) From the Applicant's review, it appears that the last Office Action takes the position that the Dobrin reference was only discrediting a particular type of vapor permeable liquid impermeable backsheet, and was not discrediting the vapor permeable liquid impermeable backsheet taught in the Wu reference.

The Applicant respectfully disagrees. The Applicant submits that, in the second portion of the Dobrin reference cited above, the Dobrin reference was referring to all prior art vapor permeable liquid impermeable backsheets and not to just a particular type of backsheet. The Applicant points back to the specific language used in Dobrin: "breathable backsheets...known...and described in the art....retarding the passage of liquid." Clearly, this refers to all prior art vapor permeable liquid impermeable backsheets. The specific patents that are subsequently listed are labeled as "example." In describing two US patents, the Dobrin reference simply appears to be listing exemplary prior art, not limiting its subsequent references to a particular type of backsheet technology.

The Applicant submits that, in the third portion of the Dobrin reference cited above, the reference to "these backsheets" refers back to all prior art vapor permeable liquid impermeable backsheets. The Applicant points back to the specific language used in Dobrin, comparing "these backsheets" to "the impermeable backsheets of the prior art." That is, in this instance, Dobrin is comparing the later (breathable) prior art backsheets to the earlier (non-breathable) prior art backsheets. This supports the premise that "these backsheets" refers back to all prior art vapor permeable liquid impermeable backsheets. The third portion of the Dobrin reference continues on to discredit such backsheets, as described above.

The Applicant submits that the Dobrin reference's teaching about the disadvantages of all prior art backsheets that are liquid impervious but vapor permeable

discredits those backsheets. The Applicant also submits that all prior art backsheets that are liquid impervious but vapor permeable, includes the embodiments taught by the Wu reference. Thus, the Dobrin reference discredits the embodiments of the Wu reference. This discreditation creates a conflict between the Dobrin reference and the Wu reference. As a result, it would not have been obvious to modify the backsheet of the diaper of the Dobrin reference with the method of making a microporous laminate from the Wu reference, as cited by the last Office Action against the Applicant's independent claim 1.

Accordingly, the Applicant submits that the invention of the Applicant's independent claim 1 would not have been obvious to one of ordinary skill in the art at the time the invention was made. Since independent claim 1 is nonobvious, and claims 2-15 and 21-25 depend from claim 1, these dependent claims also would not have been obvious to one of ordinary skill in the art at the time the invention was made.

The rejections of claims 1-15 and 21-25 under 35 USC § 103(a) over the Dobrin and Wu references are improper, because the Final Office Action failed to establish a *prima facie* case of obviousness, since the cited prior art does not provide a reasonable expectation for success.

To establish *prima facie* obviousness of a claimed invention, there must be a reasonable expectation of success. *In re Merck & Co., Inc.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). This reasonable expectation of success must be found in the prior art, and not based on the Applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

To create a backsheet with overall breathability (described in the Wu reference) and with regions of apertures (described in the Dobrin reference), as cited in the last Office Action, would require a first process for forming the (Dobrin) apertures and a second process for forming the (Wu) micropores. From the Applicant's review, there appears to be no mention in the Wu reference that a film with apertures, as described in Dobrin, can be processed to add micropores. Similarly, there appears to be no reference in the Dobrin reference that a film with micropores, as described in Wu, can be processed to add apertures.

The last Office Action attempted to affirm a reasonable expectation of success, by stating:

In response to the applicant's argument that there is no reasonable expectation for success, it is noted that while Wu does not disclose aperturing a microscopic film, a microscopic film is fully capable of being apertured after formation, and therefore the rejection stands.

(Page 3, paragraph 3.)

The Applicant respectfully points out that the above-cited assertion of reasonable success in the last Office Action does not describe a basis from the prior art, as required. Accordingly, there appears to be no reasonable expectation of success, provided by the prior art, that a first process for forming (Dobrin) apertures and a second process for forming (Wu) micropores can be applied one after the other, to form a backsheet as cited in the last Office Action. For this reason, the Applicant submits that it would not have been obvious to one of ordinary skill to apply a first process for forming (Dobrin) apertures and a second process for forming (Wu) micropores, one after the other, to form a diaper with a core backsheet material that is less breathable than a chassis backsheet material, as described in the invention of the Applicant's independent claim 1.

Accordingly, the Applicant submits that the invention of the Applicant's independent claim 1 would not have been obvious to one of ordinary skill in the art at the time the invention was made. Since independent claim 1 is nonobvious, and claims 2-15 and 21-25 depend from claim 1, these dependent claims also would not have been obvious to one of ordinary skill in the art at the time the invention was made.

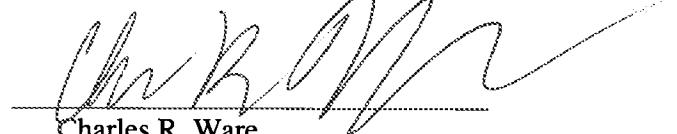
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SUMMARY

In view of all of the above, it is respectfully submitted that the appealed claims have been improperly rejected. The Applicant respectfully requests that the Honorable Board of Patent Appeals and Interferences reverse the rejections of the appealed claims and remand the application to the Examiner with instructions that these claims be allowed.

Respectfully submitted,

THE PROCTER & GAMBLE COMPANY

A handwritten signature in dark ink, appearing to read 'Charles R. Ware', is written over a horizontal line.

Charles R. Ware
Registration No. 54,881
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Date: March 3, 2008

Customer No. 27752

(Appeal Brief.doc)
Revised 05/15/2007

CLAIMS APPENDIX

1. Absorbent article comprising:
 - an absorbent core defining a core region comprising a core backsheet material;
 - a chassis region surrounding said core region comprising a chassis backsheet material;
 - whereby at least the core backsheet material comprises a laminate;
 - said laminate comprising at least one polymeric layer comprising a vapour or gas permeable film material, and further comprising a fibrous layer positioned towards the outer side of the article during its intended use,
 - wherein the core backsheet material and the chassis backsheet material are each breathable and exhibit different degrees of breathability such that MVTR value of the core backsheet material is lower than that of the chassis backsheet material, as measured by calcium-chloride adsorbing moisture through each of said materials under an outside relative humidity of about 75 % at a temperature of about 40 °C, wherein said polymeric layer comprises a polymeric matrix and particulate filler material embedded in said polymeric matrix and wherein said breathability of said core backsheet material is provided by cracks formed around said particulate filler material, wherein at least a portion of said cracks is formed by passing said laminate through at least one roll pair, said roll pair comprising engaging ridges and grooves which apply a multiplicity of corrugations to at least a portion of said laminate.
2. An absorbent material according to claim 1, wherein the polymeric layer is wider than the fibrous layer.
3. Absorbent article according to claim 1 further characterised in that in the core region the MVTR is at least 500 g/24hr/m².
4. Absorbent article according to claim 3 further characterised in that in the core region the MVTR is at least 1500 g/24hr/m².

5. Absorbent article according to claim 1 further characterised in that the MVTR values of the backsheet of the chassis region surrounding the core region are at least 20% higher than the MVTR values of the backsheet in the core region.
6. Absorbent article according to claim 1 further characterised in that the MVTR values of the backsheet in the chassis region surrounding the core region are at least 500 g/24hr/m² higher than the MVTR values of the backsheet in the core region.
7. An absorbent article according to claim 4, whereby the filler material is calcium carbonate.
8. An absorbent article according to claim 1, whereby said polymeric layer in the chassis region has a basis weight of less than 50 gsm.
9. An absorbent article according to claim 1, whereby said laminate layer has a basis weight of less than 70 gsm where it comprises said polymeric layer and said fibrous layer.
10. An absorbent article according to claim 1, whereby said fibrous layer is a non-woven web.
11. An absorbent article according to claim 1, whereby the polymeric layer and the fibrous layer are combined by heat or melt bonding.
12. An absorbent article according to claim 1, whereby the polymeric layer and the fibrous layer are combined by extrusion coating.
13. An absorbent article according to claim 1, whereby the polymeric layer and the fibrous layer are combined by adhesive.
14. An absorbent article according to claim 1, whereby the article is a baby diaper or an adult incontinence article.
15. An absorbent article according to claim 1, whereby the article is a baby diaper or an adult incontinence article.

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21. An absorbent article according to claim 1, wherein said at least one polymeric layer is a unitary layer extending both into the core backsheet material and the chassis backsheet material.
22. An absorbent article according to claim 21, wherein said chassis backsheet material comprises said unitary layer.
23. An absorbent article according to claim 1, wherein said at least one polymeric layer has a basis weight of greater than about 25 g/m².
24. An absorbent article according to claim 1, wherein said at least one polymeric layer comprises a polymeric matrix and particulate filler material embedded in said polymeric matrix.
25. An absorbent article according to claim 1, wherein at least a portion of said cracks are formed using an activation process whereby said laminate is passed through at least one roll pair, said roll pair comprising engaging ridges and grooves which provides a multiplicity of corrugations to at least a portion of said laminate.

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EVIDENCE APPENDIX

(none)

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RELATED PROCEEDINGS APPENDIX

(none)